# OECONOMIÁ COPERNICANA



## 2017 VOLUME 8 ISSUE 4, DECEMBER

p-ISSN 2083-1277, e-ISSN 2353-1827 www.oeconomia.pl

## ORIGINAL PAPER

Citation: Šafránková, J. M., & Šikýř, M. (2017). Work expectations and potential employability of millennials and post-millennials on the Czech labor market. *Oeconomia Copernicana*, 8(4), 585–599. doi: 10.24136/oc.v8i4.36

Contact to corresponding author: jana.safrankova@ambis.cz, Institute of Regional Development and Banking Institute – AMBIS, Nárožní 2600/9, 158 00 Praha 5, Czech Republic Received: 9 February 2017; Revised: 24 July 2017; Accepted: 15 August 2017

## Jana Marie Šafránková

Institute of Regional Development and Banking Institute – AMBIS, Czech Republic

## Martin Šikýř

Institute of Regional Development and Banking Institute – AMBIS, Czech Republic

# Work expectations and potential employability of millennials and post-millennials on the Czech labor market

JEL Classification: M12; J21

**Keywords:** labor market; work expectations; employability; Czech Republic

#### Abstract

**Research background:** A common problem of employing the Czech unemployed (especially young people) is that their professional and personal qualities often do not meet the requirements of employers. Despite the increasing level of education, the unemployment of young generation of millennials has been worsening. It seems that they often lack relevant professional skills and social habits, and usually have unreal expectations about their initial job opportunities. We want to explore this problem in more detail.

**Purpose of the article:** The purpose of the article is to present work expectations of today's Czech millennials and post-millennials and discuss their potential employability on the Czech labor market.

**Methods:** The paper is based on the analysis of available scientific literature and the results of the authors' questionnaire survey focused on students of three selected Czech universities and their motivation to study at university and their expectations about the future career. The survey was conducted in spring and autumn 2016. The respondents were full-time and combined bachelor's and master's students of the College of Regional Development in Prague, the Masaryk Institute of Advanced Studies of the Czech Technical University in Prague and

the Education Management Centre of the Faculty of Education of the Charles University in Prague. The relevant data were obtained from 484 students.

**Findings & Value added:** The results support the research assumption that young generation of Czech millennials show relatively high expectations related to work and career, which would limit their employability. Many employers are afraid of employing young people, but from the perspective of potential shortage of qualified and motivated people on the Czech labor market they should learn to create appropriate and attractive employment opportunities for young people to ensure effective development of their potential. The article presents common work expectations of today's Czech millennials and provides employers with some advice to manage them.

#### Introduction

There is no doubt that qualified and motivated workers determine the future prosperity and competitiveness of and organization and many employers value qualified and motivated workers as the most important source and the greatest wealth of the organization. On the other hand, people with suitable qualification and motivation significantly increase their chances on the labor market to reach a satisfying and rewarding career.

From the perspective of common job requirements, suitable job applicants must demonstrate relevant professional knowledge and skills, suitable work and social habits, and appropriate development potential for successful performance, professional growth and career advancement. However, finding such applicants on today's Czech labor market is not easy.

In recent years, many Czech employers have experienced a serious shortage of qualified and motivated workers in all professions. This problem is complicated by the fact that most employers tend to hire experienced workers than young people with inadequate experience and unreal expectations.

Subjectively, employers are afraid of organizational and performance problems of employing young people, but objectively employers lack effective strategies, policies and practices of employing young people as well as lack of understanding of their specific needs. To deal with the shortage of qualified and motivated workers on today's Czech labor market, employers should learn how to create appropriate and attractive employment opportunities for young people and how to effectively develop their potential.

The purpose of the article is to present work expectations of today's Czech millennials and post-millennials and discuss their potential employability on the Czech labor market.

## Research methodology

Achieving the purpose of the article is based on the analysis of available secondary data (especially the empirical data available in the scientific literature and the statistical data provided by the Ministry of Labor and Social Affairs of the Czech Republic and the Czech Statistical Office) and the results of the authors' questionnaire survey focused on students of three selected Czech universities and their motivation to study at university, and their expectations about the future career. The survey was conducted by authors of the article in spring and autumn 2016. The respondents were full-time and combined bachelor's and master's students of the College of Regional Development in Prague (Urban and Regional Development Management and Security and Safety Management in Regions), the Masaryk Institute of Advanced Studies of the Czech Technical University in Prague (Personnel Management in Industrial Enterprises and Management and Economy of an Industrial Enterprise) and the Education Management Centre of the Faculty of Education of the Charles University in Prague (Education Management).

The questionnaire included twenty two multiple choice questions focused on university students' motivation to study at university and their expectations about the future career: 1) What reasons led you to study at university? 2) Would you change your decision to study at university? 3) Do you think that you use your knowledge from university in practice? 4) Are you ready to develop your knowledge after graduation? 5) How do you see the demands of study at the university? 6) How do you see the quality of teaching at the university? 7) How do you see the quality of graduates? 8) How were you ready on study at the university? 9) How would you characterize your interest in study at the university? 10) Would you like to obtain a master's degree? 11) Do you work during the academic year? 12) Do you want to work in the field of study? 13) Do you think that higher education give you more chances to succeed on the labor market? 14) What abilities are the most important for the success on the labor market? 15) Do you want to work in your place of residence? 16) How do you look for a job? 17) Would you like to be a manager? 18) What do you expect in the field of work and career? 19) How do you see your chances on the labor market? 20) What net monthly income do you expect after graduation? 21) If you work, what is your net monthly income? 22) Do you want to run a business?

The relevant data were obtained from 484 students. The respondents were characterized by gender (28% male, 72% female), age (83% 29 years or less, 17% 30 years or more), form of study (76% full-time, 24% com-

bined), and year of study (39% first year, 24% second year, 29% third year, 8% fifth year).

The data analysis was based on the calculation of relative frequencies (as a share from the total number of respondents) and the evaluation of the dependence of responses on gender (male and female students) and age (students aged 29 or less and students aged 30 or more) using contingency tables and chi-square tests of independence. The test procedure included the following steps: (1) formulation of null (H<sub>0</sub>) and alternative (H<sub>A</sub>) hypothesis, (2) selection of a level of significance  $\alpha$ , (3) calculation of the chi square statistic  $\chi^2$ , (4) calculation of the degrees of freedom f, (5) selection of the critical chi-square value  $\chi^2_{\alpha}(f)$ , and (6) comparison of the chi square statistic  $\chi^2$  to the critical chi-square value  $\chi^2_{\alpha}(f)$  and acceptation or rejection of the null hypothesis.

## The workforce of millennials and post-millennials

Millennials, also known as Generation Y, are individuals born between the early 1980s and the mid-1990s (currently, individuals in their twenties to thirties). Post-millennials, also known as Generation Z, are individuals born between the mid-1990s and the present (currently, individuals younger than twenty years of age). Both theory and practice show that millennials' personalities, abilities, values, attitudes and beliefs are different from those of their parents and grandparents that belong to the generation X — individuals born from the early 1960s to the late 1980s (Kacerova, 2016, pp. 38– 51), and it seems that in the case of post-millennials these differences will be more apparent. In the workplace, the differences between generations become evident particularly in the process of cooperation and sharing knowledge and experience (Bencsik et al., 2016, pp. 90-106). These facts are important because millennials, whose knowledge and experience will be one of the most important determinants of economic growth and development (Kondratiuk-Nierodzińska, 2016, pp. 451–471), will constitute about fifty percent of the workforce by 2020 (Barbuto & Gottfredson, 2016, pp. 59-63) and because millennials think of work and career differently than members of the older generations (Stewart et al., 2017, pp. 45–54).

In the developed world, the young generation of millennials and post-millennials is greatly influenced by modern technologies (Issa & Isaias, 2016, pp. 592–617) and high standard of living (Yazici, 2016, pp. 291–306). Everything seems to be possible and available for them. This easy approach to life is also reflected in the approach to studying, work and career (Kopertynska & Kmiotek, 2015, pp. 185–201). It is positive that many

young people study to increase their chances on the labor market (Johnson et al., 2016, pp. 193–207), but their real professional and personal qualities often do not meet the common requirements of employers. Many young people lack relevant professional skills and social habits. Some of them also have no real idea about their future career, but often require positions that do not match their abilities, just to get a job promising them high earnings and a rapid career (Garcia-Arical & Van der Velden, 2008, pp. 219–239). Moreover, many young people crave for meaningful work, flexible hours, work-life balance, personal development, friendly relationships or career changes. This all leads to the fact that most employers tend to hire experienced workers rather than young people with inadequate experience and unreal expectations.

## The current situation on the Czech labor market

As the Czech economy has grown and the unemployment has fallen since 2015, many Czech employers have experienced a serious shortage of qualified and motivated workers in all professions. Today, Czech employers are looking for specialists with both secondary education (e.g. lathe operators, welders, electricians, programmers, etc.) and higher education (e.g. specialists in transport and logistics, mechanical engineers, civil engineers, electrical engineers, etc.), but the problem is that the professional and personal qualities of applicants often do not meet the requirements of employers.

Traditionally, there are huge differences on the Czech regional labor markets with respect to the number of unemployed persons and the number of vacancies (Posta & Hudecek, 2017, pp. 36–69), but in general, among the unemployed on the Czech labor market there are mainly unskilled workers, young people aged 20 to 29 and people aged 50 and over (Novak *et al.*, 2013, pp. 4–19). Especially long-term unemployment among young people seems to be a serious social problem that is associated with significant costs in the Czech Republic, as well as in other European countries (Sirůček & Pavelka, 2013, pp. 1278–1287), where the increase in unemployment (especially among young people) has led to the increase in expenditures on the total labor market policy, as well as those on the passive labor market policies and labor market service (Zielinski, 2015, pp. 185–201).

In recent years, the young generation of millennials has been regarded as a high risk group on the labor market. Despite the increasing level of education, the unemployment of this generation has been worsening (Kacerova, 2016, pp. 38–51). The problem seems to be that young people

often lack relevant professional skills and social habits, and usually have unreal expectations about their initial job opportunities, including high earnings and rapid career.

The persistent unemployment among young people can be demonstrated based on the date of the Ministry of Labor and Social Affairs of the Czech Republic (MoLSA, 2017). Figure 1 shows the quarterly average share of unemployed persons (the ratio of available job seekers aged 15 to 64 years in the population of the same age) and the quarterly average share of school leavers with all levels of education and juveniles in the total unemployment from Q1 2013 to Q3 2017. By October 31, 2017 job offices registered altogether 271,173 job seekers (including 14,009 school leavers and juveniles) and 209,866 vacancies (including 57,615 vacancies for school leavers and juveniles). There were 1.3 job seekers for one vacancy at average. In comparison, by October 31, 2016 job offices registered altogether 366,224 job seekers (including 19,845 school leavers and juveniles) and 139,063 vacancies (including 12,365 vacancies for school leavers and juveniles). There were 2.6 job seekers for one vacancy at average.

Many employers are afraid of organizational and performance problems of employing young people. In some companies the generational differences among different generations of workers generate conflict instead of synergy resulting from know-how that each generation of workers provides to the company (Bejtkovsky, 2016, pp. 105–123). But the fundamental problem lies in the fact that many employers lack effective strategies, policies and practices of employing young people as well as have no understanding of their specific personalities, abilities, values, attitudes and beliefs (Grencikova & Spankova, 2016, pp. 158-167). In other words, the young generation entering the labor market make employers change their HR strategies, policies and practices (Grencikova et al., 2015, p. 293–301) and employers must learn to effectively and efficiently attract, employ and develop millennial and post-millennial workers, whose expectations about work and career are different from those of their older colleagues and managers. If employers want to compete for and retain top millennial and postmillennials workers, they must make themselves attractive to millennial and post-millennials workers.

# Results of the authors' survey

This part summarizes the results of the authors' questionnaire survey focused on students of three selected Czech universities and their motivation to study at university and their expectations about the future career. It in-

cludes answers of 484 full-time and combined bachelor's and master's students of the College of Regional Development in Prague, the Masaryk Institute of Advanced Studies of the Czech Technical University in Prague and the Education Management Centre of the Faculty of Education of the Charles University in Prague.

From the perspective of employability of young people, the most important condition needed to succeed on the current labor market is the capability and motivation to learn and develop necessary professional knowledge, skills and abilities as well as suitable work and social habits.

According to the authors' survey results, students stated that they are motivated to study at university by a chance to increase their prospects on the labor market (70%), by the possibility of higher earnings (57%) or by the opportunity to obtain the university degree (64%). In this context, 92% of students agreed that higher education gives them more chances to succeed on the labor market. On the other hand, 73% of students stated that they see their chances on the labor market as medium. They were afraid of the strong competition and the lack of work experience. The data analysis showed no significant difference between students aged 29 or less and students aged 30 or more, but it showed a significant difference between male and female students (p < 0.05). We tested the null hypothesis that there is no difference between male and female students regarding their chances on the labor market (Table 1).

Since the chi square statistic ( $\chi^2$ ) was greater than the critical chi-square value ( $\chi^2_{0.05}$ ) we rejected the null hypothesis in favor of the alternative hypothesis. There was a difference between male and female students regarding their estimations of their chances on the labor market. The male students estimated their chances on the labor market as much higher than the female students.

The feeling of the lack of work experience affects the students' interest in studying. 54% of students stated that they were interested in the selected field of study, but it did not meet their expectations. Students complain of theoretical subjects without obvious connections and practical applications. 67% of students evaluated the quality of teaching at the university as medium. The data analysis showed no significant difference between male and female students, but it showed a significant difference between students aged 29 or less and students aged 30 or more (p < 0.05). We tested the null hypothesis that there is no difference between students aged 29 or less and students aged 30 or more regarding their evaluation of the quality of teaching at the university (Table 2).

Since the chi square statistic ( $\chi^2$ ) was greater than the critical chi-square value ( $\chi^2_{0.05}$ ) we rejected the null hypothesis in favor of the alternative hypothesis. There was a difference between students aged 29 or less and students aged 30 or more regarding their evaluation of the quality of teaching at the university. The students aged 30 or more evaluated the quality of teaching at the university as much better than the students aged 29 or less.

In connection with the work during the academic year, 85% of students stated that they worked during the academic year to earn money and get experience, but only 24% of them stated that they worked in the field of study. However, 58% of students stated that they wanted to work in the field of study, which may be the problem. Working outside the field of study does not develop professional knowledge, skills and abilities needed to find a job in the field of study. The data analysis showed no significant difference between male and female students, but it showed a significant difference between students aged 29 or less and students aged 30 or more (p < 0.05). We tested the null hypothesis that there is no difference between students aged 29 or less and students aged 30 or more regarding the work in the field of study (Table 3).

Since the chi square statistic ( $\chi^2$ ) was greater than the critical chi-square value ( $\chi^2_{0.05}$ ) we rejected the null hypothesis in favor of the alternative hypothesis. There was a difference between students aged 29 or less and students aged 30 or more regarding the work in the field of study. The students aged 30 or more work in the field of study more often than the students aged 29 or less.

From the perspective of today's common job requirements, suitable job applicants must demonstrate relevant professional knowledge, skills and abilities, suitable work and social habits, and appropriate development potential and personal aspirations for successful performance, professional growth and career advancement. Although many young people do not meet the common job requirements, their expectations about the future career are relatively high. According to the authors' survey results, the students' expectations about the future career included meaningful work (80%), self-fulfillment (70%), friendly team (66%), fair wages (63%), favorable environment (61%), job security (54%), professional management (43%), personal development (43%), employee benefits (33%) or career prospects (32%).

Many young people do not want to start from scratch, overestimate themselves, and require positions that do not match their abilities. According to the authors' survey results, 69% of students stated that they want to be managers (manage people), which is normal when they study to become managers, but they forget that it is a long way and that they have a lot to

learn. The data analysis showed no significant difference between male and female students or between students aged 29 or less and students aged 30 or more.

A specific problem of many people (young and old) is unwillingness to commute to work. According to the authors' survey results, 48% of students stated that they wanted to work in their place of residence, 35% of students stated that they were willing to commute to work, and 17% of students stated that they were willing to move for work. The most common reasons of unwillingness to commute to work were family, transport and housing. The data analysis showed no significant difference between male and female students or between students aged 29 or less and students aged 30 or more.

When it comes to wage expectations, the starting expectations of many young people are usually higher than the real wage that an employer can offer to a newcomer with the lack of relevant work experience. According to the authors' survey results, 53% of students stated that they were motivated to study at university by the possibility of higher earnings and 57% of students stated that after graduation they expected the net monthly income between EUR 750 and EUR 1,050. According to the data of the Czech Statistical Office (CZSO, 2017), in Q2 2017, the average gross monthly nominal wage was approximately EUR 1,107 (CZK 29,346). The data analysis showed a significant difference between male and female students as well as between students aged 29 or less and students aged 30 or more (p < 0.05).

In the case of male and female students, we tested the null hypothesis that there is no difference between male and female students expected net monthly income after graduation (Table 4). Since the chi square statistic  $(\chi^2)$  was greater than the critical chi-square value  $(\chi^2_{0.05})$ , we rejected the null hypothesis in favor of the alternative hypothesis. There was a difference between male and female students regarding expected net monthly income after graduation. The male students expected a higher net monthly income than the female students as well as.

In the case of students aged 29 or less and students aged 30 or more we tested the null hypothesis that there is no difference between students aged 29 or less and students aged 30 or more regarding expected net monthly income after graduation (Table 5). Since the chi square statistic ( $\chi^2$ ) was greater than the critical chi-square value ( $\chi^2_{0.05}$ ) we rejected the null hypothesis in favor of the alternative hypothesis. There was a difference between students aged 29 or less and students aged 30 or more regarding expected net monthly income after graduation. The students aged 30 or more expected a higher net monthly income than the students aged 29 or less.

Despite all the expectations and problems, students are aware of the fact that the success on the labor market is determined by their abilities. According to students, the most important abilities necessary for the success on the labor market include the ability to communicate with people (80%), the ability to solve problems (77%), the ability to apply own knowledge (59%), the ability to acquire new knowledge (57%) or the ability of team work (57%). Generally, students should continually improve their knowledge of foreign languages, their computer skills or their knowledge of management, economics, psychology, sociology, marketing, informatics or law.

#### Conclusions

The authors' survey results support the research assumption that young generation of Czech millennials and post-millennials, which is greatly influenced by modern technologies and high standard of living show relatively high expectations related to work and career that significantly limit their employability.

There is no doubt that many Czech employers value qualified and motivated people as the most important source and the greatest wealth of the organization, because suitably qualified and motivated people determine the future prosperity and competitiveness of the organization. However, finding such people on today's Czech labor market is not easy.

In recent years, the young generation of millennials (also known as Generation Y, meaning individuals born between the early 1980s and the mid-1990s, and currently in their twenties to thirties) has been regarded as a high-risk group on the labor market. They often lack relevant professional skills and social habits, and usually have unreal expectations about their initial job opportunities, including high earnings and rapid career.

Many employers are afraid of employing young people, especially because of organizational and performance problems of employing them, but from the perspective of potential shortage of qualified and motivated people on the Czech labor market, this is not a sustainable approach. Employers should change traditional stereotypes and apply a positive approach to the employment of young people, which means focusing on their strengths, not weaknesses. They should also learn how to create appropriate and attractive employment opportunities for them to ensure effective development of their potential.

Employers should establish and maintain effective relationships with suitable secondary schools and universities to have a chance to meet, attract, and select talented young people and potential workers. Employers should also create age diverse groups of people to mix the new ideas of young people with the life experience of other people in the organization.

On the other hand, young people should be ready to continually learn and develop necessary professional knowledge, skills and abilities, as well as suitable work and social habits needed to succeed on the labor market. These include knowledge of foreign languages or information technologies, as well as the ability to communicate with people, to solve problems, to apply own knowledge or to collaborate and communicate with others.

These issues open up new possibilities for further research in the field of people management and managing diverse groups of workers.

### References

- Barbuto, J. E., & Gottfredson, R. K. (2016). Human capital, the millennial's reign, and the need for servant leadership. *Journal of Leadership Studies*, 10(2). doi: 10.1002/jls.21474.
- Bejtkovsky, J. (2016). The employees of baby boomers generation, generation X, generation Y and generation Z in selected Czech corporations as conceivers of development and competitiveness in their corporation. *Journal of Competitiveness*, 8(4). doi: 10.7441/joc.2016.04.07.
- Bencsik, A., Horváth-Csikós, G., & Juhász, T. (2016). Y and Z generations at workplaces. *Journal of Competitiveness*, 8(3). doi: 10.7441/joc.2016.03.06.
- Garcia-Aracil, A., & Van der Velden, R. (2008). Competencies for young European higher education graduates: labor market mismatches and their payoffs. *Higher Education*, 55(2). doi: 10.1007/s10734-006-9050-4.
- Grencikova, A., & Spankova, J. (2016). Labour migration trends in the Slovak Republic. *Economics and Sociology*, 9(2). doi: 10.14254/2071-789X.2016/9-2/11.
- Grencikova, A., Spankova, J., & Karbach, R. (2015). Current trends in enterprise employment policies in Slovak Republic. *Actual Problems of Economics*, 170(8).
- Issa, T., & Isaias, P. (2016). Internet factors influencing generations Y and Z in Australia and Portugal: a practical study. *Information Processing & Management*, 52(4). doi: 10.1016/j.ipm.2015.12.006.
- Johnson, C. L., Gutter, M., Xu, Y. L., Cho, S. H., & DeVaney, S. (2016). Perceived value of college as an investment in human and social capital: views of generations X and Y. Family & Consumer Sciences Research Journal, 42(2). doi: 10.1111/fcsr.12195.
- Kacerova, E. (2016). Risk factors of young graduates in the competitive E.U. labour market at the end of the current economic crisis. *Journal of Competitiveness*, 8(3). doi: 10.7441/joc.2016.03.03.

- Kondratiuk-Nierodzińska, M. (2016). New knowledge generation capabilities and economic performance of Polish regions. *Equilibrium. Quarterly Journal of Economics and Economic Policy*, 11(3). doi: 10.12775/ EQUIL.2016.021.
- Kopertynska, M. W., & Kmiotek, K. (2015). Engagement of employees of generation Y theoretical issues and research experience. *Argumenta Oeconomica*, 35(2). doi: 10.15611/aoe.2015.2.10.
- MoLSA (2017). Unemployment in the Czech Republic. Retrieved from http://www.mpsv.cz/en/1614 (24.02.2017).
- Novak, V., Vokoun, M, Stellner, F., & Vochozka, M. (2016). Institutional analysis of the contemporary regional labour market in the Czech Republic. *E & M Ekonomie a Management*, 19(3). doi: 10.15240/tul/001/2016-3-001.
- Posta, V., & Hudecek, T. (2017). Features of the regional labor markets in the Czech Republic. *Statistika Statistics and Economy Journal*, 97(2).
- Sirucek, P., & Pavelka, T. (2013). Youth unemployment in the Czech Republic and the impact of economic crisis. Retrieved from http://msed.vse.cz/files/2013/229-Pavelka-Tomas-paper.pdf (24.02.2017).
- Stewart, J. S., Oliver, E. G., Cravens, K. S., & Oishi, S. (2017). Managing millennials: embracing generational differences. *Business Horizons*, 60(1). doi: 10.1016/j.bushor.2016.08.011.
- Yazici, B. (2016). Attitudes of generation Y toward luxury products and youth-led change in luxury consumption behavior. *Turkish Online Journal of Design Art and Communication*, 6(3).
- Zielinski, M. (2015). Unemployment and labor market policy in Visegrad group countries. *Equilibrium. Quarterly Journal of Economics and Economic Policy*, 10(3). doi: 10.12775/EQUIL.2015.032.

#### Annex

**Table 1.** Contingency table. Question: "How do you see your chances on the labor market?"

	High	Medium	Low	Σ
Male students	39* (29.07)**	90 (98.01)	5 (6.92)	134
Female students	66 (75.93)	264 (255.99)	20 (18.08)	350
Σ	105	354	25	484

- (1) H<sub>0</sub>: There is no difference between male and female students regarding their estimations of their chances on the labour market.
- H<sub>A</sub>: There is a difference between male and female students regarding their estimations of their chances on the labour market.
- (2) Level of significance  $\alpha = 0.05$

(3) Chi square statistic 
$$\chi^2 = \sum \left[ \frac{(P_{r,c} - E_{r,c})^2}{E_{r,c}} \right] = 6.333$$

- (4) Degrees of Freedom (f):  $(r-1)\times(c-1)=2$
- (5) Critical chi-square value  $\chi^2_{0.05}(3) = 5.991$
- (6) The chi square statistic  $(\chi^2)$  is greater than the critical chi-square value  $\chi^2_{0.05}(2)$ . The null hypothesis is rejected in favour of the alternative hypothesis.
- r the number of rows in the contingency table, c the number of columns in the contingency table

**Table 2.** Contingency table. Question: "How do you see the quality of teaching at the university?"

	High	Medium	Low	Σ
Students aged 29 or less	36 (48.88)	267 (268.44)	98 (83.68)	401
Students aged 30 or more	23 (10.12)	57 (55.56)	3 (17.32)	83
Σ	59	324	101	484

- (1) H<sub>0</sub>: There is no difference between students aged 29 or less and students aged 30 or more regarding their evaluation of the quality of teaching at the university.
- H<sub>A</sub>: There is a difference between students aged 29 or less and students aged 30 or more regarding their evaluation of the quality of teaching at the university.
- (2) Level of significance  $\alpha = 0.05$

(3) Chi square statistic 
$$\chi^2 = \sum \left[ \frac{(P_{r,c} - E_{r,c})^2}{E_{r,c}} \right] = 6.333$$

- (4) Degrees of Freedom (f):  $(r-1)\times(c-1)=2$
- (5) Critical chi-square value  $\chi^2_{0.05}(3) = 34.132$
- (6) The chi square statistic ( $\chi^2$ ) is greater than the critical chi-square value  $\chi^2_{0.05}(2)$ . The null hypothesis is rejected in favour of the alternative hypothesis.
- r the number of rows in the contingency table, c the number of columns in the contingency table

Table 3. Contingency table. Question: "Do you work during the academic year?"

	Yes, in the field of study	Yes, outside the field of study	No, but I am looking for a job	No and I do not want yet	Σ
Students aged 29 or less	66* (96.94)**	262 (243.58)	40 (33.14)	33 (27.34)	401
Students aged 30 or more	51 (20.06)	32 (50.42)	0 (6.86)	0 (5.66)	83
Σ	117	294	40	33	484

(1) H0: There is no difference between students aged 29 or less and students aged 30 or more regarding the work in the field of study.

HA: There is a difference between students aged 29 or less and students aged 30 or more regarding the work in the field of study.

(2) Level of significance  $\alpha = 0.05$ 

(3) Chi square statistic 
$$\chi^2 = \sum \left[ \frac{(P_{r,c} - E_{r,c})^2}{E_{r,c}} \right] = 80.802$$

- (4) Degrees of Freedom (f):  $(r-1)\times(c-1)=3$
- (5) Critical chi-square value  $\chi^2_{0,05}(3) = 7.815$
- (6) The chi square statistic  $(\chi^2)$  is greater than the critical chi-square value  $\chi^2_{0.05}(3)$ . The null hypothesis is rejected in favour of the alternative hypothesis.
- r the number of rows in the contingency table, c the number of columns in the contingency table

Source: authors

**Table 4.** Contingency table (male and female students). Question: "What net monthly income do you expect after graduation?"

	EUR 700 and less	EUR 750– 1,050	EUR 1,100– 1,450	EUR 1,500 and more	Σ
Male students	11* (16.06)**	62 (76.41)	31 (26.30)	30 (15.23)	134
Female students	47 (41.49)	214 (199.59)	64 (68.70)	25 (39.77)	350
Σ	58	276	95	55	484

\*observed frequencies (O), \*\* expected frequencies (E)

- (1) H0: There is no difference between male and female students regarding expected net monthly income after graduation.
- HA: There is a difference between male and female students regarding expected net monthly income after graduation.
- (2) Level of significance  $\alpha = 0.05$

(3) Chi square statistic 
$$\chi^2 = \sum \left[ \frac{(P_{r,c} - E_{r,c})^2}{E_{r,c}} \right] = 26.942$$

- (4) Degrees of Freedom (f):  $(r-1)\times(c-1) = 3$
- (5) Critical chi-square value  $\chi^2_{0.05}(3) = 7.815$
- (6) The chi square statistic  $(\chi^2)$  is greater than the critical chi-square value  $\chi^2_{0.05}(3)$ . The null hypothesis is rejected in favour of the alternative hypothesis.
- r the number of rows in the contingency table, c the number of columns in the contingency table

**Table 5.** Contingency table (students aged 29 or less and students aged 30 or more). Question: "What net monthly income do you expect after graduation?"

	EUR 700 and less	EUR 750– 1,050	EUR 1,100– 1,450	EUR 1,500 and more	Σ
Students aged 29 or less	56 (48.05)	244 (228.67)	62 (78.71)	39 (45.57)	401
Students aged 30 or more	2 (9.95)	32 (47.33)	33 (16.29)	16 (9.43)	83
Σ	58	276	95	55	484

\*observed frequencies (O), \*\* expected frequencies (E)

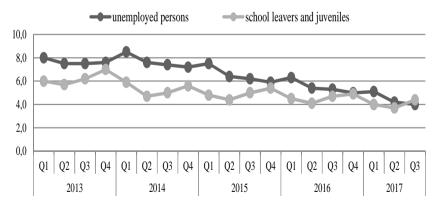
HA: There is a difference between students aged 29 or less and students aged 30 or more regarding expected net monthly income after graduation.

(2) Level of significance  $\alpha = 0.05$ 

(3) Chi square statistic 
$$\chi^2 = \sum \left[ \frac{(P_{r,c} - E_{r,c})^2}{E_{r,c}} \right] = 39.860$$

- (4) Degrees of Freedom (f):  $(r-1)\times(c-1)=3$
- (5) Critical chi-square value  $\chi^2_{0,05}(3) = 7.815$
- (6) The chi square statistic  $(\chi^2)$  is greater than the critical chi-square value  $\chi^2_{0.05}(3)$ . The null hypothesis is rejected in favour of the alternative hypothesis.
- r the number of rows in the contingency table, c the number of columns in the contingency table

**Figure 1.** The quarterly average share of unemployed persons and the quarterly average share of school leavers with all levels of education and juveniles in the total unemployment in the Czech Republic (%)



Source: authors based on MoLSA (2017).

<sup>(1)</sup> H0: There is no difference between students aged 29 or less and students aged 30 or more regarding expected net monthly income after graduation.